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2	Application Data Sheet	583US_ApplicationDataSheet.pdf	242469 f38b8728e356f76c71cbb1743d600b6cb6526d59	no	4

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DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

TECHNICAL FIELD

The present invention generally relates to detecting movement of an external object. The invention relates particularly, though not exclusively, to determining characteristics of a user notification based on the movement detection.

BACKGROUND ART

Modern electronic apparatuses may typically comprise a wide variety of events with different kinds of user notifications. As an example, for an incoming call to a mobile apparatus, a ringing tone typically has a constant volume. From the apparatus settings the ringing tone volume may also be set to increase gradually. Furthermore, the ringing tone may be played a certain pre-selectable time until the call is directed to a voicemail. However, the long ringing of an incoming call that is not answered may cause nuisance, for example in open space office environments or libraries, if the mobile apparatus is left unattended. Also in places like theaters or cinemas, where the apparatus is likely to be in close vicinity of the user, an incoming call may cause considerable disturbance.

The user notifications, for example the ringing tone, and characteristics of the user notifications may be adjusted. The control in such cases is based on the information of the mechanical state or settings of the apparatus and not on the information of the surroundings.

A known solution is related to notifying an incoming call of a voice communication. A ringing tone of the incoming call may be silenced in response to movement of

the apparatus or moving a mechanical part of the apparatus. Such mechanical part may be a flip or a slide of an apparatus, for example.

SUMMARY

According to a first example aspect of the invention there is provided a method comprising:

storing an association between a user notification and an event;

detecting the event by an apparatus;

detecting movement of an external object in a range outside the apparatus in response to the detected event; and

determining characteristics of the user notification based on the step of detecting movement.

According to an example embodiment of the invention, the method may further comprise detecting direction of the movement of the external object. The direction of the movement of the external object may be detected to be one of the following: approaching and moving away.

The event may be selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

The user notification may be selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

Characteristics of the user notification may be selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

According to an example embodiment of the invention, the event is an incoming call to the apparatus, the user notification is a ringing tone, and the characteristic of the user notification is a volume of the ringing tone. Furthermore, the method comprises decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus.

Time for diverting the incoming call to a voicemail of the user may be extended in response to the detected approaching movement of the external object in the range outside the apparatus. Caller identification may be displayed on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus.

In response to not detecting movement of the external object in the range outside the apparatus, the range for detecting movement may be increased. Furthermore, movement of the apparatus may be detected in response to the detected event and the range outside the apparatus may be determined in response to the detected movement of the apparatus.

According to a second example aspect of the invention there is provided an apparatus comprising:

a movement detector configured to detect movement of an external object in a range outside the apparatus;

at least one processor; and

at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the apparatus at least to perform:

store an association between a user notification and an event;

detect the event;

detect the movement of the external object in response to the detected event; and

determine characteristics of the user notification based on the step of detecting movement.

According to a third example aspect of the invention there is provided a computer program embodied on a computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, causes the apparatus to:

store an association between a user notification and an event;

detect the event;

detect the movement of the external object in response to the detected event; and

determine characteristics of the user notification based on the step of detecting movement.

Any foregoing memory medium may comprise a digital data storage such as a data disc or diskette, optical storage, magnetic storage, holographic storage, opto-magnetic storage, phase-change memory, resistive random access memory, magnetic random access memory, solid-electrolyte memory, ferroelectric random access memory, organic memory or polymer memory. The memory medium may be formed into a device without other substantial functions than storing memory or it may be formed as part of a device with other functions, including but not limited to a memory of a computer, a chip set, and a sub assembly of an electronic device.

Different non-binding example aspects and embodiments of the present invention have been illustrated in the foregoing. The above embodiments are used merely to explain selected aspects or steps that may be utilized in implementations of the present invention. Some embodiments may be presented only with reference to

certain example aspects of the invention. It should be appreciated that corresponding embodiments may apply to other example aspects as well.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be described, by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 shows a schematic picture of a system according to an example embodiment of the invention;

Fig. 2 shows a schematic picture of a system according to another example embodiment of the invention;

Fig. 3 shows a schematic picture of a system according to another example embodiment of the invention;

Fig. 4 shows different phases of operations in an apparatus in accordance with an example embodiment of the invention;

Fig. 5 shows different phases of operations in an apparatus in accordance with another example embodiment of the invention;

Fig. 6 presents an example block diagram of an apparatus in which various embodiments of the invention may be applied; and

Fig. 7 shows a flow diagram showing capacitive coupling operations in an apparatus in accordance with an example embodiment of the invention.

DETAILED DESCRIPTION

In the following description, like numbers denote like elements.

Fig. 1 shows a schematic picture of a system 100 according to an example embodiment of the invention. An apparatus 110 belonging to a user 120 comprises different kind of functionalities and applications. Such functionalities and applications may generate a variety of events and a variety of user notifications associated to the events. The events comprise for example incoming calls, incoming text messages, incoming mails, calendar alarms, missed calls, unread

text messages or updated news feed. The user notifications comprise different kinds of audio tones, visual effects or a tactile feedback, for example.

The user 120 may occasionally be located in a distance from the apparatus 110. When an event is triggered in the apparatus 110 with a user notification associated to the event, the user 120 typically reacts to the notification. The event of an incoming call with a ringing tone as the user notification is described as an example embodiment.

Following the triggered event and the associated user notification, the apparatus 110 may start detecting movement of external objects outside the apparatus 110. In an embodiment, the movement detection is utilized in a range 130 outside the apparatus 110. No matter the shape of the range 130 in Fig. 1 is oval, the shape may be of any form and not necessarily extending around the apparatus 110 but only to a certain direction from the apparatus 110.

According to an example embodiment of the invention, the apparatus 110 comprises a radar sensor capable of sensing movement in the environment inside the range 130. If the apparatus 110 detects movement of the user 120 inside the range 130, characteristics of the user notification may be determined. In case the apparatus 110 detects the user 120 moving towards the apparatus 110, the characteristics of the user notification may be determined assuming that the user 120 has been reached by the user notification. In the event of an incoming call with the user notification of a ringing tone, the volume of the ringing tone may be decreased in response to the detection of approaching user 120. The volume may be decreased because the user 120 has obviously heard the ringing tone and is approaching the apparatus 110 for answering the call. Furthermore, other user notifications may be determined for the user 120. For example, a display of the apparatus 110 may be turned on and caller identification may be presented on the display for the user 120. If the user 120 is not detected approaching the apparatus 110, such turning on the display and presenting caller identification would be unnecessary.

Fig. 2 shows a schematic picture of a system 100 according to another example embodiment of the invention. An event associated with a user notification may occur in a similar way as described for Fig. 1. Following the triggered event and the associated user notification, the apparatus 110 may start detecting movement of external objects outside the apparatus 110.

According to an example embodiment of the invention, the apparatus 110 comprises a radar sensor capable of sensing movement in the environment inside the range 130. If the apparatus 110 detects movement of the user 120 inside the range 130, characteristics of the user notification may be determined as described for Fig. 1. However, the user 120 may be located outside the range 130. In response to such detection, further features may be applied. In an embodiment, the range 130 for the radar sensor detecting the movement is increased to an increased range 140. Such increased range 140 enables the detection of the user 120 from a further distance to the apparatus. In case the apparatus 110 detects the user 120 moving towards the apparatus 110, the characteristics of the user notification may be determined assuming that the user 120 has been reached by the user notification. Otherwise the system may be operating as in Fig. 1.

Fig. 3 shows a schematic picture of a system 100 according to another example embodiment of the invention. An event associated with a user notification may occur in a similar way as described for Fig. 1. Following the triggered event and the associated user notification, the apparatus 110 may start detecting movement of external objects outside the apparatus 110.

According to an example embodiment of the invention, the apparatus 110 comprises a radar sensor capable of sensing movement in the environment inside the range 130. Additionally, the apparatus 110 comprises a second sensor capable of sensing movement of the apparatus 110. Such second sensor may be for example an accelerometer. In an embodiment, the second sensor is activated simultaneously with the radar sensor. Based on an indication of the apparatus 110 moving to a direction 310, changing its direction, or both, an assumption may be made that the user 120 is nearby the apparatus 110. The user 120 may be

walking, driving a car or holding the apparatus in a moving hand, for example. If the apparatus 110 detects movement of the user 120 inside the range 130, characteristics of the user notification is determined as described for Fig. 1. However, if movement of the user 120 is not detected inside the radar range 130, the range 130 needs not to be increased due to the assumption that the user 120 is nearby.

Fig. 4 shows different phases of operations in an apparatus in accordance with an example embodiment of the invention. An event of an incoming call 410 is detected in the apparatus and a ringing tone is played for the user. In response to the incoming call 410, a radar sensor is activated 420 for scanning the environment within a certain range. The radar sensor may be a Doppler radar, for example. The radar may be simple but able to detect a moving object outside the apparatus, a velocity of the object and a direction of the object movement (approaching/moving away). A transmission power of the radar basically determines the detection range of the radar: the smaller the power, the shorter the detection range. Initial power of the radar may be fairly small, and if no movement is detected in the immediate vicinity, the transmission power may be increased.

According to an example embodiment of the invention, the radar detects motion 430 in a range outside the apparatus. As described before, the radar may be capable of detecting the direction of the movement as well. In case the radar detects an object approaching 440 the apparatus, the apparatus may assume that the user of the apparatus has notified the ringing tone and is approaching to answer the call. In such a situation the characteristics of the event's user notification may be changed. For example, ringing tone volume may be decreased 445 and a display may be turned on for informing the user of the caller identification. Furthermore, the time for diverting the incoming call to a voicemail may also be extended. Eventually, after the user has reached the apparatus and either answering or rejecting 450 the incoming call, the radar may be deactivated 455.

According to an example embodiment of the invention, the radar may not detect motion in step 430. In such a situation at least two alternatives exist. First, the range of the radar may be increased 435 by increasing the transmission power of the radar. The increasing of the transmission power enables the apparatus to ensure that the user is further away from the apparatus for the earlier radar range but still approaching the apparatus. The transmission power of the radar may be increased until a preset maximum power is reached.

If the radar sensor does not detect motion in the range of the sensor, even with the maximum power, the incoming call may be diverted to the voicemail 460. Such diverting may be triggered even earlier than based on the call settings of the apparatus due to there is no movement detected in the range outside the apparatus. By diverting the call earlier to the voicemail reduces the unnecessary ringing of the apparatus when the user does not seem to be able to answer. Furthermore, power saving is achieved when being able to turn off the display and radio transceiver parts of the apparatus, for example. In an embodiment, diverting the incoming call to the voicemail 460 is resulted even if motion is detected in step 430. In case the detected movement of the possible user is moving away from the apparatus or otherwise not approaching the apparatus, the incoming call may be diverted to the voicemail 460.

According to an example embodiment of the invention, the radar still continues scanning 465 the environment outside the apparatus after diverting the call to the voicemail. However, for power saving purposes the motion sensing may be operated in a pulse mode and the transmission power of the sensor may be adjusted to a reduced range. The detected movement 470 only within a few meters range from the apparatus would trigger a user alert 475 to notify the user about a missed event, such as a call. The user alert 475 may be a sound, a light signal or a vibration, for example. Again, the triggering of user alert 475 in response to the detected motion 470 may reduce the unnecessary user alerting when the user is not in the range of the apparatus and at the same time reduce power consumption of the apparatus. In an embodiment, when no motion is detected in step 470, the apparatus remains silent and stationary. Once the user

has been reached by the user alert 475 and the user has been notified 480 of the missed event the radar is deactivated 455. Eventually the apparatus may switch to a normal standby mode 490.

Fig. 5 shows different phases of operations in an apparatus in accordance with another example embodiment of the invention. An event of an incoming call 510 is detected in the apparatus and a ringing tone is played for the user. In response to the incoming call 510, a radar sensor is activated 520 for scanning the environment within a certain range. The radar sensor may be a Doppler radar for example. The radar may be simple but able to detect a moving object outside the apparatus, a velocity of the object and a direction of the object movement (approaching/moving away). For a Doppler radar, the transmission power of the radar basically determines the detection range of the radar: the smaller the power, the shorter the detection range. Other radar types may also have other range control mechanisms. Simultaneously with the radar activation 520, a movement sensor may be activated 525. The movement sensor may be an accelerometer, for example. Such movement sensor may determine the movement of the apparatus in relation to the environment, or orientation of the apparatus. Typically the user is moving also in such circumstances, for example walking or driving a car. The user may also hold the apparatus in a moving hand. The movement sensor may be activated 525 to identify the possible movement of the apparatus that may be used in following steps of the embodiment.

Initial power of the radar sensor may be fairly small, and if no movement is detected in the immediate vicinity, the transmission power may be increased. However, if the movement sensor detected that the apparatus is moving in step 526, an assumption of the user being nearby may be made. In such a case, there is no need to increase the radar range 535 and the radar power needs not to be increased necessarily. Only a limited radar range 527 may be utilized to detect whether the user is going to respond to the event of the incoming call, for example. Furthermore, the apparatus may assume that the user of the apparatus has notified the ringing tone and is approaching to answer the call. In such a situation the characteristics of the event's user notification may be changed. For example,

the ringing tone volume may be decreased 545 and a display may be turned on for informing the user of the caller identification. In case no movement is detected in step 526, the movement sensor may be deactivated 528 and the range of the radar may be increased 535 by increasing the transmission power of the radar. The increasing of the transmission power enables the apparatus to ensure that the user is further away from the apparatus for the earlier radar range but still approaching the apparatus. The transmission power of the radar may be increased until a preset maximum power is reached.

According to an example embodiment of the invention, the radar detects motion 530 in a range outside the apparatus. As described before, the radar may be capable of detecting the direction of the object movement as well. In case the radar detects an object approaching 540 the apparatus, the apparatus may assume that the user of the apparatus has notified the ringing tone and is approaching to answer the call. In such a situation the characteristics of the event's user notification may be changed. For example, the ringing tone volume may be decreased 545 and a display may be turned on for informing the user of the caller identification. In an embodiment, the movement sensor signal 525 is used for determining the characteristics of the user notification of step 545. The ringing tone volume may be decreased in response to the radar signal 520 indicating an approaching object and the display may be turned on in response to the movement sensor signal 525 indicating a movement, or orientation change, of the apparatus. Such a movement of the apparatus may correspond to the user touching the apparatus. The radar signal may also be used for both purposes, wherein a first radar signal with longer range indicates the user approaching the apparatus and a second radar signal with shorter range indicates the user being already next to the apparatus. As described earlier in the description, the time for diverting the incoming call to a voicemail may also be extended. Eventually, after the user has reached the apparatus and either answering or rejecting 550 the incoming call, the radar may be deactivated in step 555. Also the movement sensor may be deactivated in step 555.

According to an example embodiment of the invention, the radar may not detect motion in step 530. In such a situation at least two alternatives exist. First, the range of the radar may be increased 535 by increasing the transmission power of the radar. The increasing of the transmission power enables the apparatus to ensure that the user is further away from the apparatus for the earlier radar range but still approaching the apparatus. The transmission power of the radar may be increased until a preset maximum power is reached.

If the radar sensor does not detect motion in the range of the sensor, even with the maximum power, the incoming call may be diverted to the voicemail 560. Such diverting may be triggered even earlier than based on the call settings of the apparatus due to there is no movement detected in the range outside the apparatus. By diverting the call earlier to the voicemail reduces the unnecessary ringing of the apparatus when the user does not seem to be able to answer. Furthermore, power saving is achieved when being able to turn off the display and radio transceiver parts of the apparatus, for example. Diverting the incoming call to the voicemail 560 may be resulted even if motion is detected in step 530. In case the detected movement of the possible user is moving away from the apparatus or otherwise not approaching the apparatus, the incoming call may be diverted to the voicemail 560.

In an embodiment, the radar still continues scanning 565 the environment outside the apparatus after diverting the call to the voicemail. However, for power saving purposes the motion sensing may be operated in a pulse mode and the transmission power of the sensor may be adjusted to a reduced range. The detected movement 570 only within a few meters range from the apparatus would trigger a user alert 575 to notify the user about a missed event, such as a call. The user alert 575 may be a sound, a light signal or a vibration, for example. Again, the triggering of user alert 575 in response to the detected motion 570 may reduce the unnecessary user alerting when the user is not in the range of the apparatus and at the same time reduce power consumption of the apparatus. When no motion is detected in step 570, the apparatus may remain silent and stationary. Once the user has been reached by the user alert 575 and the user has been notified 580 of

the missed event the radar may be deactivated 555. Eventually the apparatus may switch to a normal standby mode 590.

According to an example embodiment of the invention, characteristics of a user notification of an event are determined in different phases utilizing a radar, a movement sensor or both. A ringing tone may be decreased based on the radar signal indicating an approaching object. A display may be turned on based on the radar signal or the movement sensor indicating the user to be next to the apparatus or even touching it. Notifications of missed events may be alerted for the user based on the radar signal or the movement sensor indicating that the user is in a range to notify the alert. Useless ringing, vibrating or visual effects by the apparatus may be reduced. Correspondingly possible disturbance by the user notifications for other users in close range to the apparatus may be reduced, as well as power consumption due to the unnecessary user notifications.

Fig. 6 presents an example block diagram of an apparatus 600 in which various embodiments of the invention may be applied. This may be a user equipment (UE), user device or apparatus, such as a mobile terminal or other communication device.

The general structure of the apparatus 600 comprises a display 640, a vibrator 650, a radar 660, a communication interface 670, a movement sensor 680, a processor 610, and a memory 620 coupled to the processor 610. The apparatus 600 further comprises software 630 stored in the memory 620 and operable to be loaded into and executed in the processor 610. In some embodiments, the software 630 comprises one or more software modules and can be in the form of a computer program product. The apparatus 600 may further comprise a user interface controller 690 coupled to the processor 610.

The processor 610 may be, e.g., a central processing unit (CPU), a microprocessor, a digital signal processor (DSP), a graphics processing unit, or the like. Fig. 6 shows one processor 610, but in some embodiments the apparatus 600 comprises a plurality of processors.

The memory 620 may be for example a non-volatile or a volatile memory, such as a read-only memory (ROM), a programmable read-only memory (PROM), erasable programmable read-only memory (EPROM), a random-access memory (RAM), a flash memory, a data disk, an optical storage, a magnetic storage, a smart card, or the like. In some embodiments, the apparatus 600 comprises a plurality of memories. The memory 620 may be constructed as a part of the apparatus 600 or it may be inserted into a slot, port, or the like of the apparatus 600 by a user. The memory 620 may serve the sole purpose of storing data, or it may be constructed as a part of an apparatus serving other purposes, such as processing data.

The communication interface module 670 implements at least part of the user data radio discussed in connection with various embodiments of the invention. The communication interface module 670 may be, e.g., a radio interface module, such as a WLAN, Bluetooth, GSM/GPRS, CDMA, WCDMA, or LTE (Long Term Evolution) radio module. The communication interface module 670 may be integrated into the apparatus 600 or into an adapter, card or the like that may be inserted into a suitable slot or port of the apparatus 600. The communication interface module 670 may support one radio interface technology or a plurality of technologies. Fig. 6 shows one communication interface module 670, but in some embodiments the apparatus 600 comprises a plurality of communication interface modules 670.

The display 640 may be for example a liquid crystal display (LCD) or a light-emitting diode (LED) based display. A touch-sensitive surface may be integrated to the display 640 as a touch display or a touch screen. The touch-sensitive surface may also be included as a separate element, for example as a touchpad.

The radar 660 may be for example a Doppler radar sensor and the movement sensor may be for example an accelerometer or a gyroscope. The radar 660 and the movement sensor 680 may be integrated as a single component or they may be included as separate components. The vibrator 650 may be for example an

eccentric motor with vibrating component.

The user interface controller 690 comprises circuitry for receiving input from a user of the apparatus 600, e.g., via a keyboard, graphical user interface shown on the display 640 of the apparatus 600, speech recognition circuitry, or an accessory device, such as a headset, and for providing output to the user via, e.g., a graphical user interface or a loudspeaker.

A skilled person appreciates that in addition to the elements shown in Fig. 6, in some embodiments the apparatus 600 comprises other elements, such as microphones, extra displays, as well as additional circuitry such as input/output (I/O) circuitry, memory chips, application-specific integrated circuits (ASIC), processing circuitry for specific purposes such as source coding/decoding circuitry, channel coding/decoding circuitry, ciphering/deciphering circuitry, and the like. Additionally, the apparatus 600 comprises a disposable or rechargeable battery (not shown) for powering the apparatus 600 when external power if external power supply is not available.

Fig. 7 shows a flow diagram showing capacitive coupling operations in an apparatus in accordance with an example embodiment of the invention. In step 700, the method is started. In step 710, an association between a user notification and an event is stored. The event is detected by an apparatus in step 720. In step 730, movement of an external object in a range outside the apparatus in response to the detected event is detected. Characteristics of the user notification are determined based on the step of detecting movement in step 740. The method ends in step 750.

Without in any way limiting the scope, interpretation, or application of the claims appearing below, a technical effect of one or more of the example embodiments disclosed herein is that only relevant user notifications are determined. Furthermore, characteristics for the user notifications are provided in such a way that less disturbance to the environment is created and more efficient power saving is achieved for the apparatus due to avoiding unnecessary power

consumption.

Various embodiments have been presented. It should be appreciated that in this document, words comprise, include and contain are each used as open-ended expressions with no intended exclusivity.

The foregoing description has provided by way of non-limiting examples of particular implementations and embodiments of the invention a full and informative description of the best mode presently contemplated by the inventors for carrying out the invention. It is however clear to a person skilled in the art that the invention is not restricted to details of the embodiments presented above, but that it can be implemented in other embodiments using equivalent means or in different combinations of embodiments without deviating from the characteristics of the invention.

Furthermore, some of the features of the above-disclosed embodiments of this invention may be used to advantage without the corresponding use of other features. As such, the foregoing description shall be considered as merely illustrative of the principles of the present invention, and not in limitation thereof. Hence, the scope of the invention is only restricted by the appended patent claims.

Claims:

1. A method comprising:

storing an association between a user notification and an event;

detecting the event by an apparatus;

detecting movement of an external object in a range outside the apparatus in response to the detected event; and

determining characteristics of the user notification based on the step of detecting movement.

2. A method of claim 1, further comprising:

detecting direction of the movement of the external object.

3. A method of claim 2, wherein the direction of the movement of the external object is detected to be one of the following: approaching and moving away.

4. A method of claim 1, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

5. A method of claim 1, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

6. A method of claim 5, characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

7. A method of claim 1, wherein

the event is an incoming call to the apparatus;

the user notification is a ringing tone;

the characteristics of the user notification is a volume of the ringing tone; and the method further comprising:

decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus.

8. A method of claim 7, further comprising:

extending time for diverting the incoming call to a voicemail of the user in response to the detected approaching movement of the external object in the range outside the apparatus.

9. A method of claim 7, further comprising:

displaying caller identification on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus.

10. A method of claim 1, further comprising:

in response to not detecting movement of the external object in the range outside the apparatus, increasing the range for detecting movement.

11. A method of claim 1, further comprising:

detecting movement of the apparatus in response to the detected event.

12. A method of claim 11, further comprising:

determining the range outside the apparatus in response to the detected movement of the apparatus.

13. An apparatus comprising:

a movement detector configured to detect movement of an external object in a range outside the apparatus;

at least one processor; and

at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the apparatus at least to perform:

store an association between a user notification and an event;

detect the event;

detect the movement of the external object in response to the detected event; and

determine characteristics of the user notification based on the step of detecting movement.

14. The apparatus of claim 13, wherein the at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus to further perform:

detect direction of the movement of the external object.

15. The apparatus of claim 13, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

16. The apparatus of claim 13, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

17. The apparatus of claim 16, wherein the characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

18. A computer program embodied on a computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, causes the apparatus to:

store an association between a user notification and an event;

detect the event;

detect the movement of the external object in response to the detected event; and

determine characteristics of the user notification based on the step of detecting movement.

Abstract

A method, an apparatus and a computer program, where the method includes storing an association between a user notification and an event, detecting the event by an apparatus and detecting movement of an external object in a range outside the apparatus in response to the detected event. Furthermore, the method includes determining characteristics of the user notification based on the step of detecting movement.

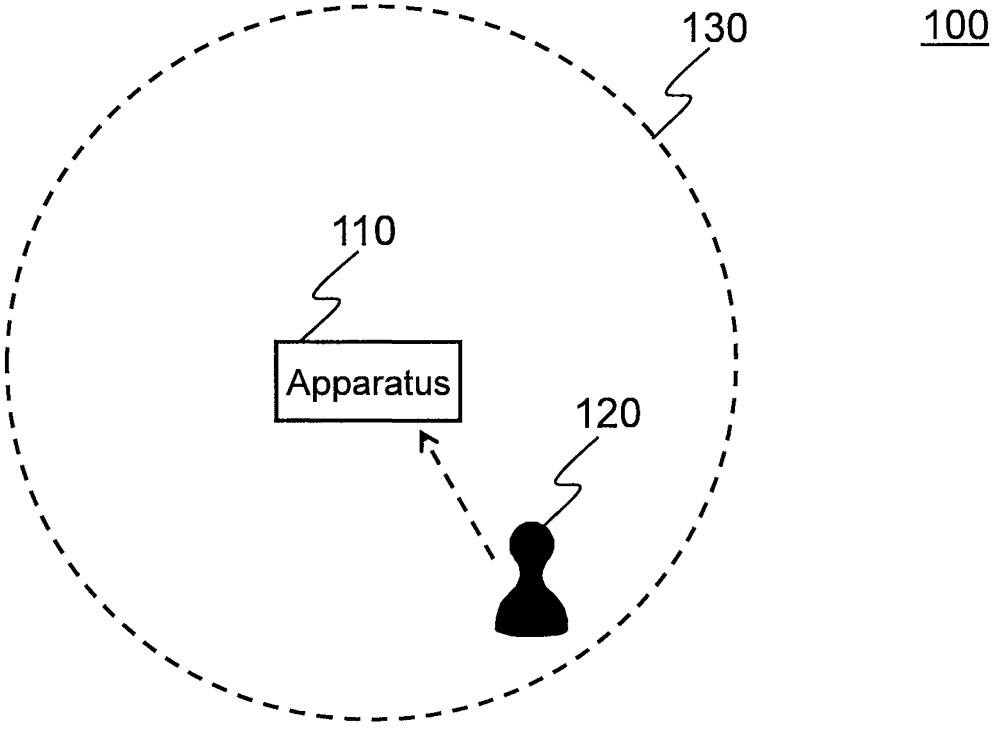

Fig. 1

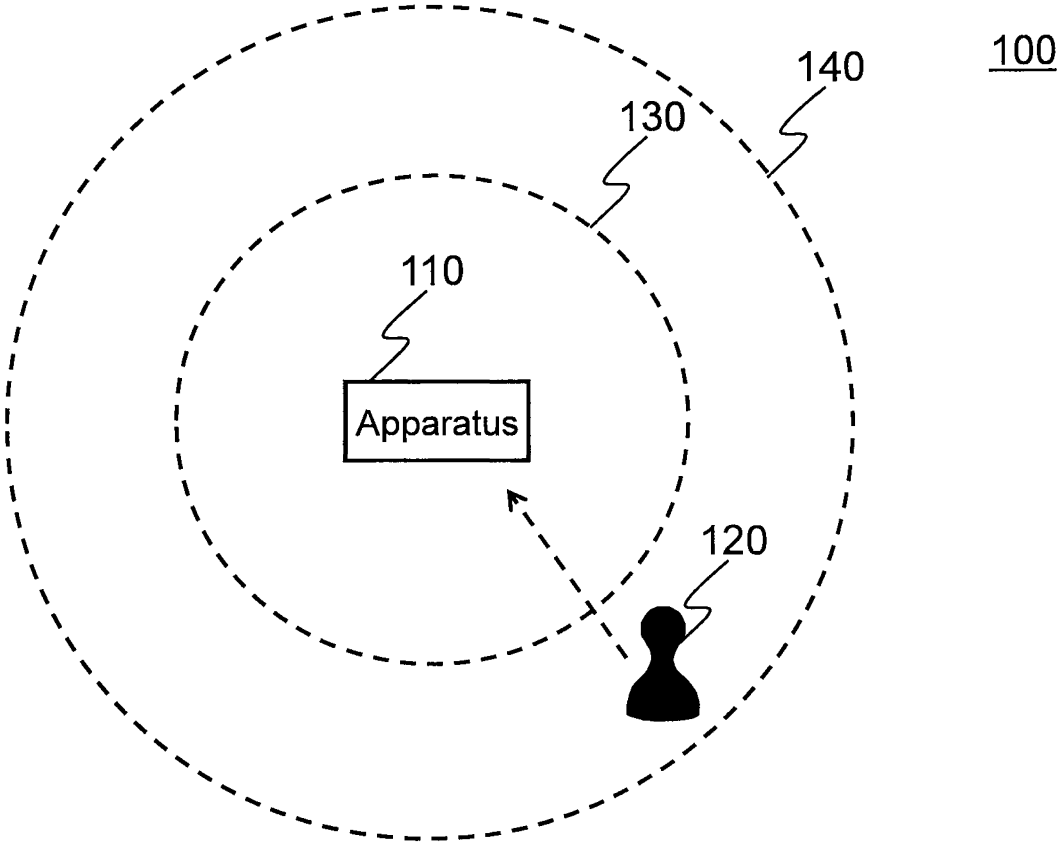

Fig. 2

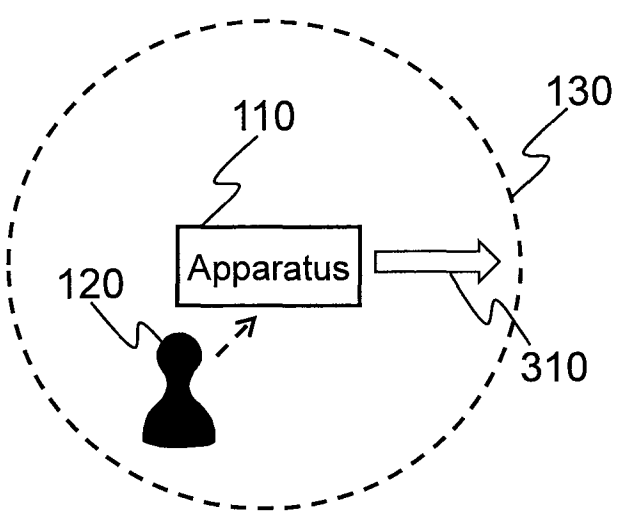
100
110
130
Apparatus
120
310

Fig. 3

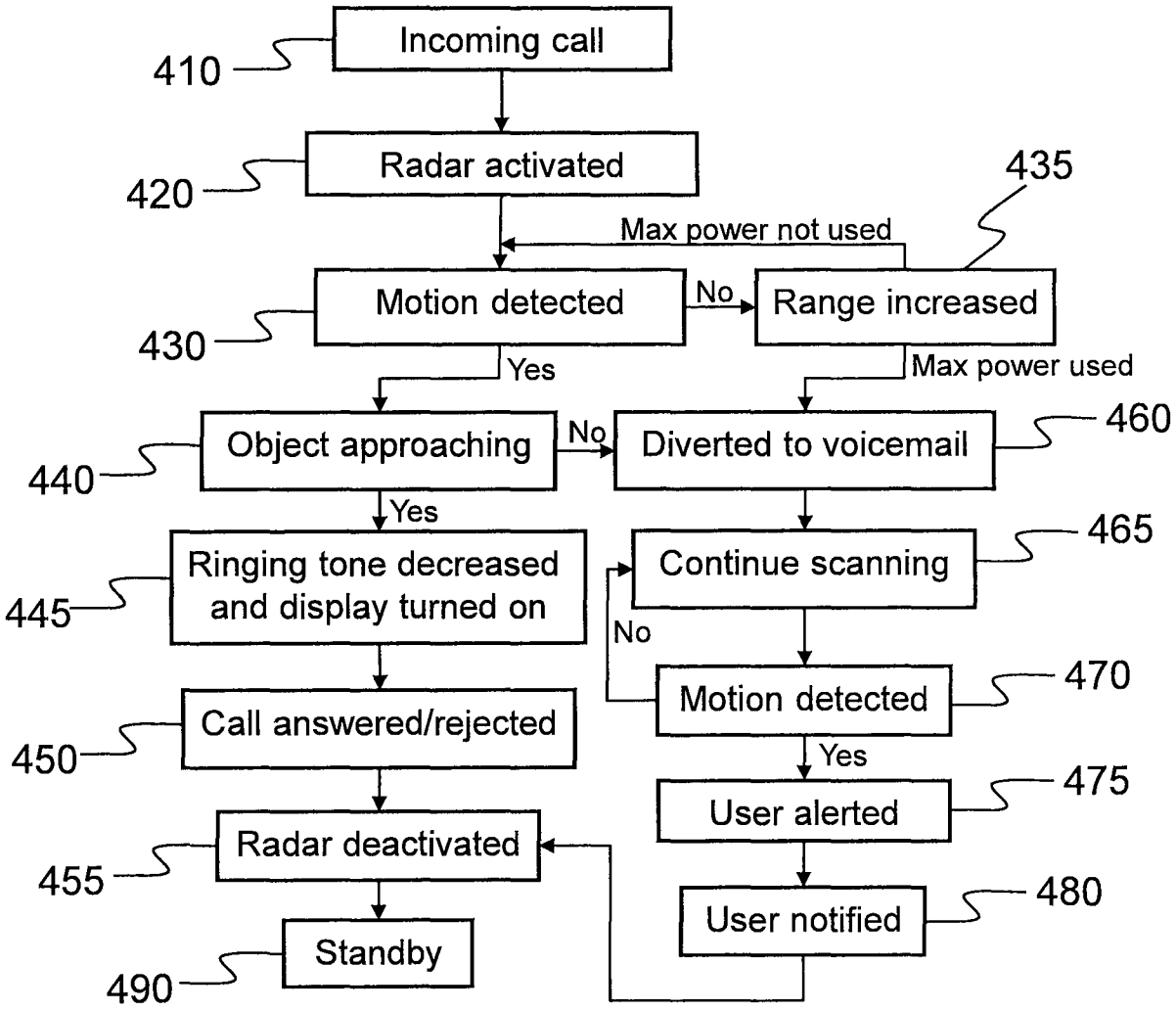
Incoming call
410
Radar activated
420
435
Max power not used
Motion detected
No
Range increased
430
Yes
Max power used
Object approaching
No
Diverted to voicemail
460
440
Yes
Ringing tone decreased and display turned on
445
Continue scanning
465
No
Call answered/rejected
450
Motion detected
470
Yes
User alerted
475
Radar deactivated
455
User notified
480
Standby
490

Fig. 4

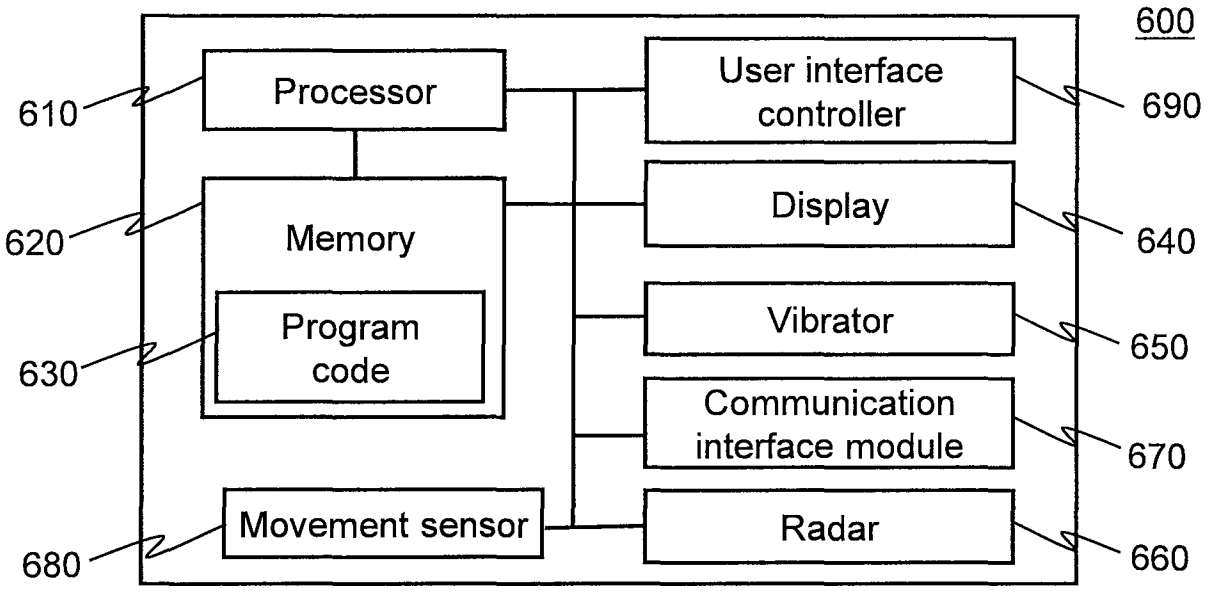
600
Processor
610
User interface controller
690
Memory
620
Display
640
Program code
630
Vibrator
650
Communication interface module
670
Movement sensor
680
Radar
660

Fig. 6

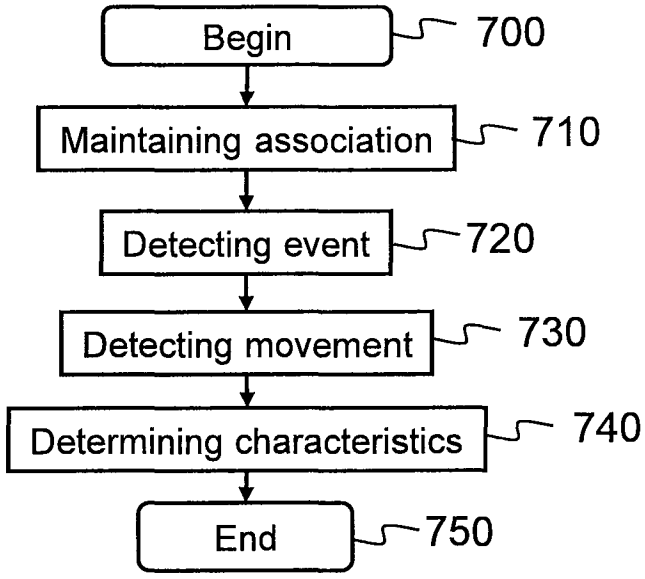
Begin
700
Maintaining association
710
Detecting event
720
Detecting movement
730
Determining characteristics
740
End
750

Fig. 7

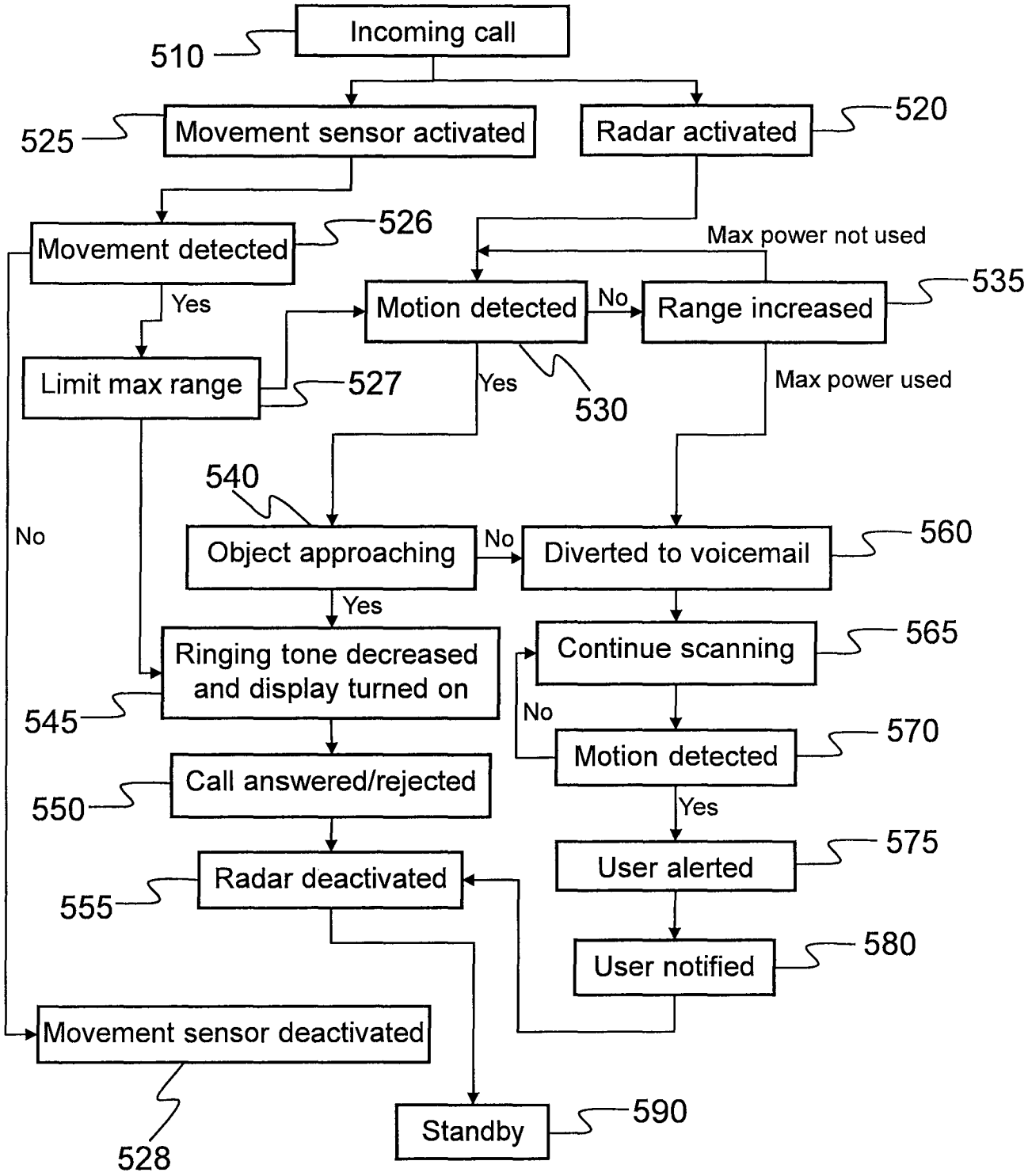
Incoming call
510
Movement sensor activated
525
Radar activated
520
Movement detected
526
Max power not used
Yes
Motion detected
No
Range increased
535
Limit max range
527
Yes
530
Max power used
540
No
Object approaching
No
Diverted to voicemail
560
Yes
Ringing tone decreased and display turned on
545
Continue scanning
565
No
Motion detected
570
Call answered/rejected
550
Yes
User alerted
575
Radar deactivated
555
User notified
580
Movement sensor deactivated
528
Standby
590

Fig. 5

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

10928 7590 04/29/2013

Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

EXAMINER	
EUSTAQUIO, CAL J	

ART UNIT	PAPER NUMBER
2683	

NOTIFICATION DATE	DELIVERY MODE
04/29/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockelord.com
Shopkins@lockelord.com
Jmedina@lockelord.com

Office Action Summary	Application No. 13/107,090	Applicant(s) RAUTIAINEN, TERHI	
	Examiner CAL EUSTAQUIO	Art Unit 2683	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2011*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-18* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-18* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *13 May 2011* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some * c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Interim copies:

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

Claim Rejection 35 USC 101

1. **Claim 18** recites, in part: "A computer program embodied on a computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, causes the apparatus to..."

While the specification at figure 6, elements 610-630 and [0075-77] discloses respectively that "The general structure of the apparatus 600 comprises a display 640, a vibrator 650, a radar 660, a communication interface 670, a movement sensor 680, a processor 610, and a memory 620 coupled to the processor 610. The apparatus 600 further comprises software 630 stored in the memory 620 and operable to be loaded into and executed in the processor 610. In some embodiments, the software 630 comprises one or more software modules and can be in the form of a computer program product. The apparatus 600 may further comprise a user interface controller 690 coupled to the processor 610" and "The memory 620 may be for example a non-volatile or a volatile memory, such as a read-only memory (ROM), a programmable read-only memory (PROM), erasable programmable read-only memory (EPROM), a random-access memory (RAM), a flash memory, a data disk, an optical storage, a magnetic storage, a smart card, or the like" –these recitations do not exclude signals per se for the claimed "computer program embodied on a computer readable medium."

Accordingly, Office Policy with regards to non-transitory medium is as follows:

"The United States Patent and Trademark Office (USPTO) is obliged to give claims their broadest reasonable interpretation consistent with the specification during proceedings before the USPTO. *See In re Zletz,* 893 F.2d 319(Fed. Cir. 1989)(during patent examination the pending claims must be interpreted

as broadly as their terms reasonably allow). The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically covers forms of non-transitory tangible media and transitory propagating signals *per se* in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. *See* MPEP 2111.01. When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 U.S.C. @ 101 as covering non-statutory subject matter. *See* In *re Nuijten,* 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and *Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C.* 101, Aug. 24,2009; p. 2."

To overcome such 101 rejection, one suggestion is to amend the claim to:

"A non-transitory computer program embodied on a computer readable medium comprising computer storing executable program code which, when executed by at least one processor of an apparatus, [causes] the program causing the apparatus to…"

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-9, and 11-17** are rejected under 35 U.S.C. 103(a) as being obvious over Logan, U.S. 2007/0037605.

On claim 1, Logan recites: A method comprising:

storing an association between a user notification and an event ([0019-21] describes associating a person, location, or characteristics of an environment and providing a notification corresponding to the detected event. The detected event includes determining changes in ambient light, detecting a proximity of a person to the phone, or determining characteristics of an incoming phone call);

detecting the event by an apparatus (see the above);

detecting an external object in a range outside the apparatus in response to the detected event ([0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person. Furthermore, the limitation “range outside the apparatus” is interpreted to mean any distance just outside the case or container of the apparatus); and

determining characteristics of the user notification based on the step of detecting said object ([0019] recites varying the light or vibration intensity responsive to the an alert. The detecting movement feature includes determining the location of persons near the phone).

Except for the claimed:

detecting movement of an external object in a range outside the apparatus in response to the detected event; and determining characteristics of the user notification based on the step of detecting movement.

With respect to the above detecting and determining steps *based on detecting movement*, Logan, as recited above, includes determining the location of objects or persons located proximate to the cell phone. Logan does not specifically recite the detection of determination of object or personnel movement. However,

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the determination and detection of movements of persons or objects. It is known that object move relative to the position of a cell phone, such as personnel walking or objects, such as vehicles, moving. Measuring positional information would likely include detecting movement because movement is defined is a change in position with respect to time. One of ordinary skill in the art would have provided the feature of determining and detecting movement of an object or person as a means to allowing the user to better determine identify the detected object or person.

On claim 2, Logan recites: A method of **claim 1**, further comprising: detecting direction of the movement of the external object. See the rejection of **claim 1.**

On claim 3, Logan recites: A method of **claim 3**, wherein the direction of the movement of the external object is detected to be one of the following: approaching and moving away. [0134] recites determining if a person is walking toward the phone, which is the same thing as "approaching."

On claim 4, Logan recites: A method of **claim 1**, wherein the event is selected from a group consisting of: an incoming call; an incoming mail; a received short

message; a calendar alarm; a missed call; an unread short message; and an updated news feed. [0019] recites providing an alert notification responsive to an incoming call.

On claim 5, Logan recites: A method of **claim 1**, wherein the user notification is selected from a group consisting of: a sound signal; a vibration signal; a light signal; and a text displayed on a display of the apparatus. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 6, Logan recites: A method of **claim 5**, characteristics of the user notification is selected from a group consisting of: a volume of the sound signal; a strength of the vibration signal; an availability of the light signal; and an availability of the text displayed. See the rejection of **claim 5.**

On claim 7, Logan recites: A method of **claim 1**, wherein the event is an incoming call to the apparatus; the user notification is a ringing tone; the characteristics of the user notification is a volume of the ringing tone; and the method further comprising: decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus. [0135] recites decreasing of a phone's ringer volume decreasing in response to a person walking towards the phone.

On claim 8, Logan recites except: A method of **claim 7**, further comprising: extending time for diverting the incoming call to a voicemail of the user in response to the detected approaching movement of the external object in the range outside the apparatus. Logan, [0145-148] recites adjusting the time to defaulting to voicemail an incoming call depending on the location of the user. Furthermore, [0142] recites

switching the incoming call to voicemail based on the user's learned history of answering an incoming call.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include the user's approach to a phone. Logan, as above, includes the detection of the user's position with respect to the phone and adjusting the default to voicemail corresponding to the user's position with respect to the phone. Couple this with the likelihood that a user, upon hearing the phone ringing, would approach the phone to answer it, the outcome of these likely scenarios is that the reference as well as known user habits predicts the claimed invention with a likelihood of success.

On claim 9, Logan recites except: A method of **claim 7**, further comprising: displaying caller identification on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus. Logan, [0164], recites providing enabling of the caller id response of the user contacting the phone. Furthermore, [0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the option of providing caller ID responsive to the proximity of the user to the phone. As recited above, Logan includes this option in the form of physically handling the phone while other recited functions include providing adjustment of functions as a result of the user being proximate to the phone. Providing such a caller ID feature when the user is proximate to the phone would make the display relevant to the user as opposed to not showing the display when the user is absent.

On claim 11, Logan recites: A method of **claim 1**, further comprising: detecting movement of the apparatus in response to the detected event. [0136] recites the portable phone being placed next to a Blue tooth associated device and controlling the phone's volume response to the phone's placement.

On claim 12, Logan recites: A method of **claim 11**, further comprising: determining the range outside the apparatus in response to the detected movement of the apparatus. [0075] recites adjusting the phone's functions when the user moves a certain distance. In this example, the user moves 100 feet.

On claim 13, Logan recites: An apparatus comprising: a movement detector configured to detect movement of an external object in a range outside the apparatus; at least one processor (figure 1, figure 2, and [0054-70] includes using a processor and program memory); and at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the apparatus at least to perform: store an association between a user notification and an event; detect the event; detect the movement of the external object in response to the detected event; and determine characteristics of the user notification based on the step of detecting movement. See the rejection of **claim 1** with respect to the functions associated with the above claimed elements.

On claim 14, Logan recites: The apparatus of **claim 13**, wherein the at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus to further perform: detect direction of the movement of the external object. [0134] recites determining if a person is walking toward the phone,

which is the same thing as detecting a direction of the person with respect to the position of the phone.

On claim 15, Logan recites: The apparatus of **claim 13**, wherein the event is selected from a group consisting of: an incoming call; an incoming mail; a received short message; a calendar alarm; a missed call; an unread short message; and an updated news feed. [0019] recites providing an alert notification responsive to an incoming call.

On claim 16, Logan recites: The apparatus of **claim 13**, wherein the user notification is selected from a group consisting of: a sound signal; a vibration signal; a light signal; and a text displayed on a display of the apparatus. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 17: Logan recites: The apparatus of **claim 16**, wherein the characteristics of the user notification is selected from a group consisting of: a volume of the sound signal; a strength of the vibration signal; an availability of the light signal; and an availability of the text displayed. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 18: Logan recites: A computer program embodied on a computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus (figure 1, figure 2, and [0054-70] includes using a processor and program memory), causes the apparatus to: store an association between a user notification and an event; detect the event; detect the movement of the external object in response to the detected event; and determine characteristics of the

user notification based on the step of detecting movement. See the rejection of **claim 1.**

4. **Claim 10** are rejected under 35 U.S.C. 103(a) as being obvious over Logan, U.S. 2007/0037605 in view of Kam, U.S. 2003/0151502.

On claim 10: Logan recites except: A method of **claim 1**, further comprising: in response to not detecting movement of the external object in the range outside the apparatus, increasing the range for detecting movement. [0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person and controlling notification functions of the phone accordingly.

In the analogous art of vehicle ranging and detection, Kam, [0019] and [0052] recites increasing the detection range of a vehicle sensing device when conditions obscure the detection of objects or persons in front of the vehicle.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the radar detecting system of Kam to produce a system that response in a similar manner to the claimed invention. Obscuration or having the limited ability to detect objects up close is considered to be the same as not detecting an external object outside of the claimed apparatus and therefore, the concept of improving detecting capabilities to compensate for this feature is performed through extending the range of the apparatus to determine if anything beyond the first detectable range. One of ordinary skill in the art would have known/recognized this known feature and would have substituted this feature for better personnel detecting.

Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Logan, U.S. 6,788,766 recites providing a cellular communication service which allows a user's cell phone to interact with another cellular phone depending on a predetermined location of the second cellular phone. See Abstract of the same.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAL EUSTAQUIO whose telephone number is (571) 270-7229. The examiner can normally be reached on Mon -Thu 9:00 Am-5:30Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman whose telephone number is (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. E./

Examiner, Art Unit 2683

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2683

Docket No. 1004289.583US
Confirmation No. 6686

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Terhi Rautiainen et al.

Group Art Unit: 2683

Serial No.: 13/107,090

Examiner: Cal J. Eustaquio

Filed: May 13, 2011

For: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

AMENDMENT

Mail Stop AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Office Action dated April 29, 2013, Applicants respectfully request reconsideration of the above-identified application in view of the following amendments and remarks.

A Listing of the Claims begins on page 2
Remarks begin on page 6

IN THE CLAIMS:

1. (Currently Amended) A method comprising:

storing an association between a user notification and an event;

detecting the event by an apparatus and triggering the associated user notification;

detecting movement of an external object in a range outside the apparatus in response to the detected event; and

~~determining~~ changing characteristics of the user notification based on the step of detecting movement.

2. (Original) A method of claim 1, further comprising:

detecting direction of the movement of the external object.

3. (Original) A method of claim 2, wherein the direction of the movement of the external object is detected to be one of the following: approaching and moving away.

4. (Original) A method of claim 1, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

5. (Original) A method of claim 1, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

6. (Original) A method of claim 5, characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

7. (Original) A method of claim 1, wherein

the event is an incoming call to the apparatus;

the user notification is a ringing tone;

the characteristics of the user notification is a volume of the ringing tone; and the method further comprising:

decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus.

8. (Original) A method of claim 7, further comprising:

extending time for diverting the incoming call to a voicemail of the user in response to the detected approaching movement of the external object in the range outside the apparatus.

9. (Original) A method of claim 7, further comprising:

displaying caller identification on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus.

10. (Original) A method of claim 1, further comprising:

in response to not detecting movement of the external object in the range outside the apparatus, increasing the range for detecting movement.

11. (Original) A method of claim 1, further comprising:

detecting movement of the apparatus in response to the detected event.

12. (Original) A method of claim 11, further comprising:

determining the range outside the apparatus in response to the detected movement of the apparatus.

13. (Currently Amended) An apparatus comprising:

a movement detector configured to detect movement of an external object in a range outside the apparatus;

at least one processor; and

at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the apparatus at least to perform:

store an association between a user notification and an event;

detect the event and trigger the associated user notification;

detect the movement of the external object in response to the detected event; and

~~determine~~ change characteristics of the user notification based on the step of detecting movement.

14. (Original) The apparatus of claim 13, wherein the at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus to further perform:

detect direction of the movement of the external object.

15. (Original) The apparatus of claim 13, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

16. (Original) The apparatus of claim 13, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

17. (Original) The apparatus of claim 16, wherein the characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

18. (Currently Amended) A computer program embodied on a non-transitory computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, causes the apparatus to:

store an association between a user notification and an event;

detect the event and trigger the associated user notification;

detect the movement of the external object in response to the detected event; and

~~determine~~ change characteristics of the user notification based on the step of detecting movement.

REMARKS

Claims 1-18 are pending in this application.

By the present amendment, Applicants have amended claims 1, 13 and 18.

No new matter has been presented.

Reconsideration of the above-identified application in view of the foregoing amendments and the following remarks is respectfully requested.

Rejections Under 35 U.S.C. §101:

Claim 18 was rejected under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter. Applicants have amended claim 18 to specify that the "computer readable medium" recited therein is a "non-transitory" computer readable medium. Applicants respectfully submit that claim 18, as amended complies with 35 U.S.C. §101, and thus, request that the rejection be withdrawn.

Rejections Under 35 U.S.C. §103:

Claims 1-9 and 11-18 were rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent Publication No. 2007/0037605 by Logan ("Logan").

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Logan in view of U.S. Patent Publication No. 2003/0151502 by Kam.

Of the foregoing claims, 1, 13 and 18 are independent.

Claim 1, as amended, recites: "A method comprising:

storing an association between a user notification and an event;

detecting the event by an apparatus and triggering the associated user notification;

detecting movement of an external object in a range outside the apparatus in response to the detected event; and

~~determining~~ changing characteristics of the user notification based on the step of detecting movement."

Support for the amendment can be found, e.g., on page 6, lines 10 to 15 and page 8, lines 20 to 31 of the application as originally filed:

> "Following the triggered event and the associated user notification, the apparatus 110 may start detecting movement of external objects outside the apparatus 110. In an embodiment, the movement detection is utilized in a range 130 outside the apparatus 110. No matter the shape of the range 130 in Fig. 1 is oval, the shape may be of any form and not necessarily extending around the apparatus 110 but only to a certain direction from the apparatus 110."
>
> (Application, page 6, lines 10 to 15.)
>
> "According to an example embodiment of the invention, the radar detects motion 430 in a range outside the apparatus. As described before, the radar may be capable of detecting the direction of the movement as well. In case the radar detects an object approaching 440 the apparatus, the apparatus may assume that the user of the apparatus has notified the ringing tone and is approaching to answer the call. In such a situation the characteristics of the event's user notification may be changed. For example, ringing tone volume may be decreased 445 and a display may be turned on for informing the user of the caller identification. Furthermore, the time for diverting the incoming call to a voicemail may also be extended. Eventually, after the user has reached the apparatus and either answering or rejecting 450 the incoming call, the radar may be deactivated 455."
>
> (Application, page 8, lines 20 to 31.)

Applicants respectfully submit that claim 1, as amended, is patentable over Logan.

Logan describes an automated selection of an appropriate alert notification to signal the arrival of an incoming call directed to a portable telephone; e.g., to automatically switch between a cellular telephone's ring and vibrate modes. These operating modes may be

automatically controlled by sensing the location of the portable phone, or of persons and objects near to the portable phone, and/or by sensing the characteristics of the environment in which the portable phone is being used, or by detecting the characteristics of the inbound telephone call.

The mechanisms used in Logan to acquire the needed status data may include GPS or MPS subsystems for determining the absolute location of the portable phone; sensors for detecting and/or measuring the magnitude of signals received from identifiable beacon transmitters at known locations; sensors for detecting ambient light, sound and pressure to determine the likely status of the telephone; and a built-in accelerometer that may be used to determine when and how the telephone has been subjected to movement.

The Office Action alleges that with respect to the detecting movement step and the determining step based on detecting movement of e.g., claim 1, "it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the determination and detection of movements of persons or objects." (Office Action, p. 5) Applicants respectfully disagree.

Logan describes a portable telephone in which the position of the portable telephone is determined and an alert for an incoming call is produced based on the detected position of the portable telephone. However, there is no activity needed from the user. Logan discloses:

> "[0020] These variations in the behavior of the portable telephone may be automated without needing attention from the user by responding to information indicating the location or mode of use of the phone, or changes in the environment in which the phone is used or the character of the calling party."

This is different than Applicants' invention as defined by amended claim 1 where movement of an external object, such as the user, is detected.

Furthermore, Logan very clearly uses the determined position (of, e.g., the portable telephone) to produce the call alert. Applicants respectfully submit that it is pure hindsight only in view of the teachings of the instant application to state that one of ordinary skill in the art would have been motivated by Logan to "detect movement of an external object" rather than an exact position of the portable telephone.

In other words, there is no reason to detect movement of an external object in Logan since the determined position of, e.g., the portable telephone, is used therein for producing the call alert and once the call alert is produced there is no further activity needed. Thus, the nature of Logan and the claimed invention are clearly very different.

Although Applicants respectfully assert that claim 1 as originally presented is not obvious in view of Logan, Applicants have herein amended claim 1 to further clarify the nonobvious differences.

The claimed "detecting movement of an external object" aims at "adjusting characteristics of the user notification based on [the detected movement of an external object]", such as the user. By associating a user notification and an event, the user notification may be triggered once the event is detected and the characteristics of the user notification may be changed based on the detected movement, as required by amended claim 1. This is entirely different than Logan wherein the determined position is used when providing the call alert in the first place.

Moreover, assuming, *arguendo*, that one of ordinary skill in the art would have been motivated to modify Logan to include detecting movement in the measuring position information (which Applicants do not concede), the resulting methodology still would have been different than Applicants' invention as defined by amended claim 1. This is because the only

change to Logan would have been to use the movement instead of the position for selecting the call alert. However, even under that scenario the feature of "changing characteristics of the user notification based on the step of detecting movement", as recited in amended claim 1, would have been missing.

For at least the foregoing reasons, Applicants respectfully submit that Logan does not teach or suggest the subject matter recited in amended claim 1. Nor would one of ordinary skill in the art had been motivated to modify the teachings of Logan in an a manner that would have arrived at the claimed invention.

Accordingly, Applicants respectfully submit that claim 1, as amended, is patentable over Logan.

Claims 13 and 18, as amended, contain features that are the same as those found in amended claim 1, and thus, those claims are allowable for at least the same reasons as set forth above in urging the allowance of claim 1.

Dependent Claims:

Applicants do not believe it necessary at this time to address the rejections of the dependent claims as Applicants believe that the foregoing places the independent claims in condition for allowance. Applicants, however, reserve the right to address those rejections in the future should such a response be deemed necessary and appropriate.

CONCLUSION

Applicants respectfully submit that this Application is in condition for allowance for which action is earnestly solicited.

If a telephone conference would facilitate prosecution of this Application in any way, the Examiner is invited to contact the undersigned at the number provided.

AUTHORIZATION

The Commissioner is hereby authorized to charge any fees which may be required for this response, or credit any overpayment to Deposit Account No. 504827, Order No. 1004289.583US.

Furthermore, in the event that an extension of time is required, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above-noted Deposit Account No. 504827, Order No. 1004289.583US.

Respectfully submitted,

LOCKE LORD LLP

Date: July 29, 2013

By: _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

10928 7590 08/14/2013

Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

EXAMINER	
EUSTAQUIO, CAL J	
ART UNIT	**PAPER NUMBER**
2683	

NOTIFICATION DATE	DELIVERY MODE
08/14/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockelord.com
Shopkins@lockelord.com
Jmedina@lockelord.com

Office Action Summary	Application No. 13/107,090	Applicant(s) RAUTIAINEN, TERHI	
	Examiner CAL EUSTAQUIO	Art Unit 2683	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/29/2013*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-18* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-18* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some * c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. **Claims 1-9, and 11-18** are rejected under 35 U.S.C. 103(a) as being obvious over Logan, U.S. 2007/0037605.

On claim 1, Logan recites: A method comprising:

storing an association between a user notification and an event ([0019-21] describes associating a person, location, or characteristics of an environment and providing a notification corresponding to the detected event. The detected event includes determining changes in ambient light, detecting a proximity of a person to the phone, or determining characteristics of an incoming phone call. This is further found in

an example shown in [0074-75] in which a user and his positional relationship to his phone causes a change in the ringing volume of the phone in a movie theater);

detecting the event by an apparatus *and triggering the associated user notification* (see the above);

detecting an external object in a range outside the apparatus in response to the detected event ([0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person. Furthermore, the limitation “range outside the apparatus” is interpreted to mean any distance just outside the case or container of the apparatus); and

changing characteristics of the user notification based on the step of detecting said object ([0019] recites varying the light or vibration intensity responsive to the an alert. The detecting movement feature includes determining the location of persons near the phone).

Except for the claimed:

detecting movement of an external object in a range outside the apparatus in response to the detected event; and determining characteristics of the user notification based on the step of detecting movement.

With respect to the above detecting and determining steps *based on detecting movement*, Logan, as recited above, includes determining the location of objects or persons located proximate to the cell phone. Logan does not specifically recite the detection of determination of object or personnel movement. However,

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the determination and detection of movements of persons or objects. It is known that objects move relative to the position of a cell phone, such as personnel walking or objects, such as vehicles, moving. Measuring positional information would likely include detecting movement because movement is defined is a change in position with respect to time. One of ordinary skill in the art would have provided the feature of determining and detecting movement of an object or person as a means to change a notification according to socially acceptable ringing volume (as described in [0075] of Logan).

On claim 2, Logan recites: A method of **claim 1**, further comprising: detecting direction of the movement of the external object. See the rejection of **claim 1.**

On claim 3, Logan recites: A method of **claim 3**, wherein the direction of the movement of the external object is detected to be one of the following: approaching and moving away. [0134] recites determining if a person is walking toward the phone, which is the same thing as "approaching."

On claim 4, Logan recites: A method of **claim 1**, wherein the event is selected from a group consisting of: an incoming call; an incoming mail; a received short message; a calendar alarm; a missed call; an unread short message; and an updated news feed. [0019] recites providing an alert notification responsive to an incoming call.

On claim 5, Logan recites: A method of **claim 1**, wherein the user notification is selected from a group consisting of: a sound signal; a vibration signal; a light signal; and

a text displayed on a display of the apparatus. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 6, Logan recites: A method of **claim 5**, characteristics of the user notification is selected from a group consisting of: a volume of the sound signal; a strength of the vibration signal; an availability of the light signal; and an availability of the text displayed. See the rejection of **claim 5.**

On claim 7, Logan recites: A method of **claim 1**, wherein the event is an incoming call to the apparatus; the user notification is a ringing tone; the characteristics of the user notification is a volume of the ringing tone; and the method further comprising: decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus. [0135] recites decreasing of a phone's ringer volume decreasing in response to a person walking towards the phone.

On claim 8, Logan recites except: A method of **claim 7**, further comprising: extending time for diverting the incoming call to a voicemail of the user in response to the detected approaching movement of the external object in the range outside the apparatus. Logan, [0145-148] recites adjusting the time to defaulting to voicemail an incoming call depending on the location of the user. Furthermore, [0142] recites switching the incoming call to voicemail based on the user's learned history of answering an incoming call.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include the user's approach to a phone. Logan, as above, includes

the detection of the user's position with respect to the phone and adjusting the default to voicemail corresponding to the user's position with respect to the phone. Couple this with the likelihood that a user, upon hearing the phone ringing, would approach the phone to answer it, the outcome of these likely scenarios is that the reference as well as known user habits predicts the claimed invention with a likelihood of success.

On claim 9, Logan recites except: A method of **claim 7**, further comprising: displaying caller identification on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus. Logan, [0164], recites providing enabling of the caller id response of the user contacting the phone. Furthermore, [0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the option of providing caller ID responsive to the proximity of the user to the phone. As recited above, Logan includes this option in the form of physically handling the phone while other recited functions include providing adjustment of functions as a result of the user being proximate to the phone. Providing such a caller ID feature when the user is proximate to the phone would make the display relevant to the user as opposed to not showing the display when the user is absent.

On claim 11, Logan recites: A method of **claim 1**, further comprising: detecting movement of the apparatus in response to the detected event. [0136] recites the portable phone being placed next to a Blue tooth associated device and controlling the phone's volume response to the phone's placement.

On claim 12, Logan recites: A method of **claim 11**, further comprising: determining the range outside the apparatus in response to the detected movement of the apparatus. [0075] recites adjusting the phone's functions when the user moves a certain distance. In this example, the user moves 100 feet.

On claim 13, Logan recites: An apparatus comprising: a movement detector configured to detect movement of an external object in a range outside the apparatus; at least one processor (figure 1, figure 2, and [0054-70] includes using a processor and program memory); and at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the apparatus at least to perform: store an association between a user notification and an event; detect the event *and trigger the associated user notification*; detect the movement of the external object in response to the detected event; and *change* characteristics of the user notification based on the step of detecting movement. See the rejection of **claim 1** with respect to the functions associated with the above claimed elements.

On claim 14, Logan recites: The apparatus of **claim 13**, wherein the at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus to further perform: detect direction of the movement of the external object. [0134] recites determining if a person is walking toward the phone, which is the same thing as detecting a direction of the person with respect to the position of the phone.

On claim 15, Logan recites: The apparatus of **claim 13**, wherein the event is selected from a group consisting of: an incoming call; an incoming mail; a received short message; a calendar alarm; a missed call; an unread short message; and an updated news feed. [0019] recites providing an alert notification responsive to an incoming call.

On claim 16, Logan recites: The apparatus of **claim 13**, wherein the user notification is selected from a group consisting of: a sound signal; a vibration signal; a light signal; and a text displayed on a display of the apparatus. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 17: Logan recites: The apparatus of **claim 16**, wherein the characteristics of the user notification is selected from a group consisting of: a volume of the sound signal; a strength of the vibration signal; an availability of the light signal; and an availability of the text displayed. [0019] recites varying the light or vibration intensity responsive to an alert.

On claim 18: Logan recites: A computer program embodied on a *non-transitory* computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus (figure 1, figure 2, and [0054-70] includes using a processor and program memory), causes the apparatus to: store an association between a user notification and an event; detect the event *and trigger the associated user notification*; detect the movement of the external object in response to the detected event; and *change* characteristics of the user notification based on the step of detecting movement. See the rejection of **claim 1.**

3. **Claim 10** are rejected under 35 U.S.C. 103(a) as being obvious over Logan, U.S. 2007/0037605 in view of Kam, U.S. 2003/0151502.

On claim 10: Logan recites except: A method of **claim 1**, further comprising: in response to not detecting movement of the external object in the range outside the apparatus, increasing the range for detecting movement. [0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person and controlling notification functions of the phone accordingly.

In the analogous art of vehicle ranging and detection, Kam, [0019] and [0052] recites increasing the detection range of a vehicle sensing device when conditions obscure the detection of objects or persons in front of the vehicle.

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the radar detecting system of Kam to produce a system that response in a similar manner to the claimed invention. Obscuration or having the limited ability to detect objects up close is considered to be the same as not detecting an external object outside of the claimed apparatus and therefore, the concept of improving detecting capabilities to compensate for this feature is performed through extending the range of the apparatus to determine if anything beyond the first detectable range. One of ordinary skill in the art would have known/recognized this known feature and would have substituted this feature for better personnel detecting.

Response to Arguments

4. The applicant's arguments regarding **claim 1** have been carefully reviewed and are not persuasive. The argument states that Logan's recitations, described in page 8, 3rd paragraph, are different than the applicant's invention, in which "movement of an external object, such as the user, is detected." The argument surrounds the claimed limitations "detecting movement of an external object in a range outside the apparatus in response to the detected event."

5. Contrary to the applicant's assertions, the examiner finds no distinction between the claimed limitations and the recited prior art. The applicant's arguments states that, in Logan, there is no activity needed from the user to provide changes in the user notification. However, the claim limitations do not take into account that the phone's behavior is not necessarily independent of the user's actions. As shown in Logan, [0075], the user carries the phone in a movie theater and depending upon the user's position, the phone's ringing is also changed. The claimed "detected event" is the ringing of the user's phone. Detecting the movement of the external object is the user moving around in the theater with the user being the "external object." It so happens that the user carries the phone. In effect, the phone may not only be detecting its own position, but, by default, the phone is also tracking the movement of the user. This is the same thing as the claimed "detecting movement of an external object in a range outside the apparatus in response to the detected event." Furthermore, in response to the applicant's argument on page 9 regarding the applicant's rebuttal on the motivation to modify, because the claimed limitations have changed, the applicant's argument

regarding the motivation applied to the previous rejection is moot because the new limitations invoked a rejection under a new rationale. See the rejections provided above. Similarly, the above response also applies to similar **claims 13 and 18.**

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAL EUSTAQUIO whose telephone number is (571) 270-7229. The examiner can normally be reached on Mon -Thu 9:00 Am-5:30Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman whose telephone number is (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. E./

Examiner, Art Unit 2683

/Brian A Zimmerman/

Supervisory Patent Examiner, Art Unit 2683

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EUSTAQUIO, CAL J

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 11/27/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

TITLE OF INVENTION: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1780	$300	$0	$2080	02/27/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

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Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

10928 7590 11/27/2013
Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

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Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

TITLE OF INVENTION: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1780	$300	$0	$2080	02/27/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
EUSTAQUIO, CAL J	2683	340-670000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29	NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27	NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.	NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

10928 7590 11/27/2013

Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

EXAMINER	
EUSTAQUIO, CAL J	

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 11/27/2013

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 290 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 290 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No. 13/107,090	Applicant(s) RAUTIAINEN, TERHI	
	Examiner CAL EUSTAQUIO	Art Unit 2683	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *applicant interview dated 11/13/2013*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-18*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date *11/13/2013* .
5. ☒ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/C. E./
Examiner, Art Unit 2683

1. The present application is being examined under the pre-AIA first to invent provisions.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John E. Hoel, Attorney-for-Applicant on 13 November 2013.

Claim 1 (amended) A method comprising:

storing, in a telephone, an association between a user notification alert and an event occurring at the telephone;

detecting the event by the telephone ~~an apparatus~~ and triggering the associated user notification alert;

in response to the detecting of the event, detecting by the telephone, using radar, movement of an external object in a range outside the telephone ~~apparatus in response to the detected event~~; and

changing characteristics of the user notification alert based on the step of detecting movement.

Claim 13 (amended): An apparatus comprising:

a movement detector, the movement detector comprising a radar equipped telephone configured to detect movement of an external object in a range outside the [[apparatus]] telephone;

at least one processor; and

at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the [[apparatus]] radar equipped telephone at least to perform:

stor[[e]]ing an association between a user notification and an event;

detecting the event and triggering the associated user notification;

detecting the movement of the external object in response to the detected event; and

chang[[e]]ing characteristics of the user notification based on the step of the radar equipped telephone detecting movement of the external object.

Claim 18 (amended): A computer program embodied on a non-transitory computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus comprising a radar equipped telephone, causes the processor in the radar equipped telephone to:

store an association between a user notification and [[an]] a detected event;

process the detected [[the]] event and trigger the associated user notification corresponding to the detected event;

process a detected [[the]] movement of [[the]] an external object outside the radar equipped telephone in response to the detected event; and

change characteristics of the user notification based on the step of processing the detect[[ing]]ed movement.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAL EUSTAQUIO whose telephone number is (571) 270-7229. The examiner can normally be reached on Mon -Thu 9:00 Am-5:30Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman whose telephone number is (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. E./
Examiner, Art Unit 2683

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2683

Applicant-Initiated Interview Summary	Application No.	Applicant(s)	
	13/107,090	RAUTIAINEN, TERHI	
	Examiner	Art Unit	
	CAL EUSTAQUIO	2683	

All participants (applicant, applicant's representative, PTO personnel):

(1) *CAL EUSTAQUIO*. (3)_____.

(2) *John E. Hoel, Attorney-for-applicant*. (4)_____.

Date of Interview: *13 November 2013*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1,13 and 18*.

Identification of prior art discussed: *none*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant offered examiner draft amendment proposals. The examiner responded that an additional search and approval of the proposed amendments would be needed to determine allowability of the proposed draft amendments. The applicant agreed to wait for a response while the examiner searched for art related to the draft amendments and sought approval of the same from a primary examiner. The examiner searched relevant terms associated with the proposed amendments and no art related to the draft amendments was found. The examiner then conferred with a primary examiner who approved of allowing the draft amendments.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/C. E./ Examiner, Art Unit 2683	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Docket No. 1004289.583US (4208-4619)
Confirmation No. 6686

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Terhi Rautiainen et al.

Group Art Unit: 2683

Serial No.: 13/107,090

Examiner: Cal J. Eustaquio

Filed: May 13, 2011

For: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

AMENDMENT UNDER 37 C.F.R. 1.114

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Final Office Action dated August 14, 2013 and the Examiner's amendment accompanying the notice of allowance dated November 27, 2013, Applicants respectfully request reconsideration of the above-identified application in view of the following amendments and remarks. A request for continued examination (RCE) accompanies this paper.

A Listing of the Claims begins on page 2,

Remarks begin on page 7.

IN THE CLAIMS:

1. (Currently Amended) A method comprising:

storing, in a mobile communications device ~~telephone~~, an association between a user notification alert and an event occurring at the mobile communications device ~~telephone~~;

detecting the event by the mobile communications device ~~telephone~~ and triggering the associated user notification alert;

in response to the detecting of the event, detecting by the mobile communications device ~~telephone~~, using radar, movement of an external object in a range outside the mobile communications device ~~telephone~~; and

changing characteristics of the user notification alert based on the step of detecting movement.

2. (Original) A method of claim 1, further comprising:

detecting direction of the movement of the external object.

3. (Original) A method of claim 2, wherein the direction of the movement of the external object is detected to be one of the following: approaching and moving away.

4. (Original) A method of claim 1, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

5. (Original) A method of claim 1, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

6. (Original) A method of claim 5, characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

7. (Original) A method of claim 1, wherein

the event is an incoming call to the apparatus;

the user notification is a ringing tone;

the characteristics of the user notification is a volume of the ringing tone; and the method further comprising:

decreasing the volume of the ringing tone in response to the detected approaching movement of the external object in the range outside the apparatus.

8. (Original) A method of claim 7, further comprising:

extending time for diverting the incoming call to a voicemail of the user in response to the detected approaching movement of the external object in the range outside the apparatus.

9. (Original) A method of claim 7, further comprising:

displaying caller identification on a display of the apparatus in response to the detected approaching movement of the external object in the range outside the apparatus.

10. (Original) A method of claim 1, further comprising:

in response to not detecting movement of the external object in the range outside the apparatus, increasing the range for detecting movement.

11. (Original) A method of claim 1, further comprising:

detecting movement of the apparatus in response to the detected event.

12. (Original) A method of claim 11, further comprising:

determining the range outside the apparatus in response to the detected movement of the apparatus.

13. (Currently Amended) An apparatus comprising:

a movement detector, the movement detector comprising a radar equipped mobile communications device ~~telephone~~ configured to detect movement of an external object in a range outside the mobile communications device ~~telephone~~;

at least one processor; and

at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the radar equipped mobile communications device ~~telephone~~ at least to perform:

storing an association between a user notification and an event;

detecting the event and triggering the associated user notification;

detecting the movement of the external object in response to the detected event; and

changing characteristics of the user notification based on the step of the radar equipped mobile communications device ~~telephone~~ detecting movement of the external object.

14. (Original) The apparatus of claim 13, wherein the at least one memory and the computer program code are configured to, with the at least one processor, cause the apparatus to further perform:

detect direction of the movement of the external object.

15. (Original) The apparatus of claim 13, wherein the event is selected from a group consisting of:

an incoming call;

an incoming mail;

a received short message;

a calendar alarm;

a missed call;

an unread short message; and

an updated news feed.

16. (Original) The apparatus of claim 13, wherein the user notification is selected from a group consisting of:

a sound signal;

a vibration signal;

a light signal; and

a text displayed on a display of the apparatus.

17. (Original) The apparatus of claim 16, wherein the characteristics of the user notification is selected from a group consisting of:

a volume of the sound signal;

a strength of the vibration signal;

an availability of the light signal; and

an availability of the text displayed.

18. (Currently Amended) A computer program embodied on a non-transitory computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, comprising a radar equipped mobile communications device ~~telephone~~, causes the processor in the radar equipped mobile communications device ~~telephone~~ to:

store an association between a user notification and a detected event;

process the detected event and trigger the associated user notification corresponding to the detected event;

process a detected movement of an external object outside the radar equipped mobile communications device ~~telephone~~ in response to the detected event; and

change characteristics of the user notification based on the step of processing the detected movement.

REMARKS

I. Status of the Claims:

Claims 1-18 are pending in this application. Prior to the present amendment, the claims were in the form after having been amended by the Examiner's amendment accompanying the notice of allowance dated November 27, 2013. By the present amendment, Applicants have amended claims 1, 13 and 18. No new matter has been presented.

Reconsideration of the above-identified application in view of the foregoing amendments and the following remarks is respectfully requested.

II. Rejections Under 35 U.S.C. §103 in the Final Office Action dated August 14, 2013:

Claims 1-9 and 11-18 were rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent Publication No. 2007/0037605 by Logan ("Logan").

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Logan in view of U.S. Patent Publication No. 2003/0151502 by Kam.

III. Response to Rejections Under 35 U.S.C. §103:

Of the foregoing claims, 1, 13 and 18 are independent.

Claim 1, as amended, recites:

A method comprising:

storing, in a mobile communications device ~~telephone~~, an association between a user notification alert and an event occurring at the mobile communications device ~~telephone~~;

detecting the event by the mobile communications device ~~telephone~~ and triggering the associated user notification alert;

in response to the detecting of the event, detecting by the mobile communications device ~~telephone~~, using radar, movement of an external object in a range outside the mobile communications device ~~telephone~~; and

changing characteristics of the user notification alert based on the step of detecting

movement.

Support for the amendment can be found, inter alia, on page 6, lines 17-32 and page 14, lines 13-23 of the application as originally filed.

The Applicant's remarks in the earlier filed amendments concerning the Logan and Kam references, are incorporated herein by reference.

The Logan Reference

Applicants respectfully submit that claim 1, as amended, is patentable over Logan.

Logan describes an automated selection of an appropriate alert notification to signal the arrival of an incoming call directed to a portable telephone; e.g., to automatically switch between a cellular telephone's ring and vibrate modes. These operating modes may be automatically controlled by sensing the location of the portable phone, or of persons and objects near to the portable phone, and/or by sensing the characteristics of the environment in which the portable phone is being used, or by detecting the characteristics of the inbound telephone call.

The mechanisms used in Logan to acquire the needed status data may include GPS or MPS subsystems for determining the absolute location of the portable phone; sensors for detecting and/or measuring the magnitude of signals received from identifiable beacon transmitters at known locations; sensors for detecting ambient light, sound and pressure to determine the likely status of the telephone; and a built-in accelerometer that may be used to determine when and how the telephone has been subjected to movement.

However, there is no disclosure or suggestion in the Logan reference of the Applicant's claimed detecting an event occurring at the mobile communications device and in response to the detecting of the event, detecting by the mobile communications device, using radar, movement of an external object in a range outside the mobile communications device. Moreover, there is no disclosure or suggestion of changing characteristics of a user notification alert associated with the event, based on the detection of the movement of the external object.

The Office Action alleges that with respect to the detecting movement step and the determining step based on detecting movement of e.g., claim 1, "it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include into Logan the determination and detection of movements of persons or objects." (Office Action, p. 4) Applicants respectfully disagree.

Logan describes a portable telephone in which the position of the portable telephone is determined and an alert for an incoming call is produced based on the detected position of the portable telephone. However, there is no activity needed from the user. Logan discloses:

> "[0020] These variations in the behavior of the portable telephone may be automated without needing attention from the user by responding to information indicating the location or mode of use of the phone, or changes in the environment in which the phone is used or the character of the calling party."

This is different than Applicants' invention as defined by amended claim 1 where movement of an external object, such as the user, is detected.

Furthermore, Logan very clearly uses the determined position (of, e.g., the portable telephone) to produce the call alert. Applicants respectfully submit that it is pure hindsight only in view of the teachings of the instant application to state that one of ordinary skill in the art would have been motivated by Logan to "detect movement of an external object" rather than an exact position of the portable telephone.

In other words, there is no reason to detect movement of an external object in Logan since the determined position of, e.g., the portable telephone, is used therein for producing the call alert and once the call alert is produced there is no further activity needed. Thus, the nature of Logan and the claimed invention are clearly very different.

Although Applicants respectfully assert that claim 1 as originally presented is not obvious in view of Logan, Applicants have herein amended claim 1 to further clarify the nonobvious differences.

The claimed "detecting movement of an external object" aims at "changing characteristics of the user notification based on [the detected movement of an external object]",

such as the user. By associating a user notification and an event, the user notification may be triggered once the event is detected and the characteristics of the user notification may be changed based on the detected movement, as required by amended claim 1. This is entirely different than Logan wherein the determined position is used when providing the call alert in the first place.

Moreover, assuming, for the sake of argument, that one of ordinary skill in the art would have been motivated to modify Logan to include detecting movement in the measuring position information (which Applicants do not concede), the resulting methodology still would have been different than Applicants' invention as defined by amended claim 1. This is because the only change to Logan would have been to use the movement instead of the position for selecting the call alert. However, even under that scenario, the feature of "changing characteristics of the user notification based on the step of detecting movement", as recited in amended claim 1, would have been missing.

For at least the foregoing reasons, Applicants respectfully submit that Logan does not teach or suggest the subject matter recited in amended claim 1. Nor would one of ordinary skill in the art had been motivated to modify the teachings of Logan in an a manner that would have arrived at the claimed invention.

Accordingly, Applicants respectfully submit that claim 1, as amended, is patentable over Logan.

Claims 13 and 18, as amended, contain features that are the same as those found in amended claim 1, and thus, those claims are allowable for at least the same reasons as set forth above in urging the allowance of claim 1.

The Kam Reference

The Kam reference discloses an automatic warning signal system for a vehicle. The system includes a radar sensor for detecting when a following vehicle comes too close to the rear of the vehicle. The system produces a warning signal when the detector detects the following vehicle being too close, which causes the driver of the following vehicle to slow down.

However, there is no disclosure or suggestion in the Kam reference or in the combination of Logan and Kam, of the Applicant's claimed detecting an event occurring at the mobile communications device and in response to the detecting of the event, detecting by the mobile communications device, using radar, movement of an external object in a range outside the mobile communications device. Moreover, there is no disclosure or suggestion of changing characteristics of a user notification alert associated with the event, based on the detection of the movement of the external object.

Dependent Claims:

Applicants do not believe it necessary at this time to address the rejections of the dependent claims as Applicants believe that the foregoing places the independent claims in condition for allowance. Applicants, however, reserve the right to address those rejections in the future should such a response be deemed necessary and appropriate.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **504827**, Order No. 1004289.583US (4208-4619).

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **504827**, Order No. 1004289.583US (4208-4619)

Respectfully submitted,
LOCKE LORD LLP

Dated: February 10, 2014

By: /John E. Hoel/
Attorney
Registration No. 26,279

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

10928 7590 06/04/2014

Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

EXAMINER
EUSTAQUIO, CAL J

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 06/04/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

TITLE OF INVENTION: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	09/04/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

10928 7590 06/04/2014
Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

TITLE OF INVENTION: DETECTING MOVEMENT FOR DETERMINING CHARACTERISTICS OF USER NOTIFICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	09/04/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
EUSTAQUIO, CAL J	2683	340-670000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
❑ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/107,090	05/13/2011	Terhi Rautiainen	1004289.583US	6686

10928 7590 06/04/2014

Locke Lord LLP
IP Docket Department
3 World Financial Center
New York, NY 10281-2101

EXAMINER	
EUSTAQUIO, CAL J	

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 06/04/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	Examiner	Art Unit	AIA (First Inventor to File) Status: No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *RCE filed 2/10/2014* .
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☐ The allowed claim(s) is/are _____. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/C. E./
Examiner, Art Unit 2683

The present application is being examined under the pre-AIA first to invent provisions.

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance:

Claim 1 cites: A method comprising:

storing, in a mobile communications device telephone, an association between a user notification alert and an event occurring at the mobile communications device telephone;

detecting the event by the mobile communications device telephone and triggering the associated user notification alert;

in response to the detecting of the event, detecting by the mobile communications device telephone, using radar, movement of an external object in a range outside the mobile communications device telephone; and

changing characteristics of the user notification alert based on the step of detecting movement.

Claim 13 cites: An apparatus comprising:

a movement detector, the movement detector comprising a radar equipped mobile communications device telephone configured to detect movement of an external object in a range outside the mobile communications device;

at least one processor; and at least one memory including computer program code, the at least one memory and the computer program code being configured to, with the at least one processor, cause the radar equipped mobile communications device at least to perform:

storing an association between a user notification and an event;

detecting the event and triggering the associated user notification;

detecting the movement of the external object in response to the detected event; and

changing characteristics of the user notification based on the step of the radar equipped mobile communications device detecting movement of the external object.

Claim 18 cites: A computer program embodied on a non-transitory computer readable medium comprising computer executable program code which, when executed by at least one processor of an apparatus, comprising a radar equipped mobile communications device causes the processor in the radar equipped mobile communications device to:

store an association between a user notification and a detected event;

process the detected event and trigger the associated user notification corresponding to the detected event;

process a detected movement of an external object outside the radar equipped mobile communications device in response to the detected event; and

change characteristics of the user notification based on the step of processing the detected movement.

The closest meaningful prior art of record is a U.S. patent to Logan, U.S. 2007/0037605. The principle and relevant features of Logan that are related to the application are found in the following citations: [0019-21] describes associating a person, location, or characteristics of an environment and providing a notification

corresponding to the detected event. The detected event includes determining changes in ambient light, detecting a proximity of a person to the phone, or determining characteristics of an incoming phone call. This is further found in an example shown in [0074-75] in which a user and his positional relationship to his phone causes a change in the ringing volume of the phone in a movie theater; [0022] recites controlling the cell phone in response to determining the position of the phone with respect to another object or person; [0019] recites varying the light or vibration intensity responsive to the an alert. However, this reference does not disclose changing a user notification based on radar detection of an external object and notifications based on the relationship between the radar equipped mobile communications device and the externally detected object.

Conclusion

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAL EUSTAQUIO whose telephone number is (571) 270-7229. The examiner can normally be reached on Mon -Thu 9:00 Am-5:30Pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Brian Zimmerman whose telephone number is (571) 272-3059. The fax phone number for the organization where this application or proceeding is assigned is

571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CAL EUSTAQUIO/

Examiner, Art Unit 2683

/BRIAN ZIMMERMAN/

Supervisory Patent Examiner, Art Unit 2683